

Spectrograph ECHELLE

Intensified Reticon

TO CAM 12/4

Grating 300L

Log Sheet

RAW RET 9

Telescope 61" WYETHObserver run/14Date NOV 19-20 1965 Disk ORO 793

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90°	5187A 80μ SLIT
		2				8 MIN	NOT SURE OF ECHELLE SETTINGS
		3			↑	90°	OK
NOV 20-21		4			↓	90°	5187A 80μ X21135 ECH 592 1.1670
		5				5 MIN	
		6			↑	90°	
		7	17 30 38	23 46 18	↓	90°	
		8				15 MIN	MOSTLY CLOUDS
		9			↑	90°	
		10			↓	90°	
		11	G210-46	205801	400342	5 MIN	(6.5) CLOUDS
		12			↑	90°	
		13			↓	90°	
		14	S105417	19:52:47	10:36:47	6 MIN	(8.8)
		15			↑	90°	HOLD (OUM/125)
DEC 2-3		16			↓	90°	5187A 80μ SLIT
		17	S13365	6:19:35	-5:25:48	11 MIN	8.0 (POOR SEE. CLOUDS)
		18			↑	90°	
		19			↓	90°	COMPUTER CRASHED
		20	+251981	8:41:27	24:59:00	13 MIN	(9.3)
		21			↑	90°	
		22	<del>TH-AR</del>	<del>8:48:36</del>	<del>-3:25:10</del>	90°	(9.6)
		23	G114-26	8:56:39	-3:49:36	6 MIN	(9.6)
		24			↑	90°	
		25			↓	90°	
		26	G41-34	9:20:06	11:29:06	4 MIN	(9.6)
		27			↑	90°	
		28			↓	90°	
		29	G147-58	11:27:43	36:07:00	5 MIN	(9.9)
		30			↑	90°	
		31					
		32					

Spectrograph ECHELLE Intensified Reticon

TO CAM 12/4

Grating \_\_\_\_\_

Log Sheet

RAW/RET 9

Telescope 61" WYETH

Date DEC 2-3 1985

Observer GS

Disk ORO 794

Change....	File	ID	RA	Dec	1950.0	L/R	↑/↓	Exposure	Comments
		TH-AR					↓	90°	5187 A - 80μ SLIT
	G61-24		12:55:04	18:57:48				7 min	(8.9) POOR SEEING
		TH-AR					↑	90°	
		TH-AR					↓	90°	
	H89449		10:17:01	19:43:31				3 min	(4.8) IAU STANDARD
		TH-AR					↑	90°	
		TH-AR					↓	90°	
	H92588		10:38:51	01:28:41				2 min	(6.3) IAU STANDARD
		TH-AR					↑	90°	
		TH-AR					↓	90°	
	G44-45		10:50:48	10:00:24				10 min	(10.1) HALOS
		TH-AR					↑	90°	
		TH-AR					↓	90°	
	G43-3		9:46:12	13:59:18				4 min	(8.3)
		TH-AR					↑	90°	
		TH-AR					↓	90°	
	SKY-DAWN							7 min	
	BH-AR						↑	90°	
	<del>TH-AR</del> INCANDS							120 min	
	INCAND							120 min	
	INCAND							83 min	
Dec 3-4		TH-AR					↓	90°	5187 A 80μ SLIT
	<del>H89449</del>		4:06:14	19:28:43				3 min	(5.5) IAU STANDARD
		TH-AR					↑	90°	
		TH-AR					↓	90°	
	G37-26		3:05:28	26:09:06				6 min	(8.0) HALOS
		TH-AR					↑	90°	
		TH-AR					↓	90°	
	G89-14		7:19:48	08:55:12				20 min	(10.4) INCREAS. CLPS
		TH-AR					↓	90°	
	G89-14		"	"				10 min	"
		TH-AR					↑	90°	CLEARING

Spectrograph ECHELLE

Intensified Reticon

TO CAM 12/6

Grating \_\_\_\_\_

Log Sheet

RAW/RET 9

Telescope 61" WYETHDate DEC 3-4 1985Observer GSDisk ORO 795

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90 <sup>s</sup>	5187A 80μ SLIT "HALOS"
		2	558912	06:12:35	37:44:30		2 MIN (8.9)
		3			↑	90 <sup>s</sup>	
		4			↓	90 <sup>s</sup>	
		5	G90-25	07:50:22	30:45:40		3 MIN (8.2)
		6			↑	90 <sup>s</sup>	
		7			↓	90 <sup>s</sup>	
		8	G87-45	07:29:47	31:13:36		20 MIN (11.4)
		9			↕	90 <sup>s</sup>	
		10	G87-45	"	"		10 MIN " INCREAS. CLDS (OVERCAST AT END)
		11			↑	90 <sup>s</sup>	
		12			↓	90 <sup>s</sup>	
		13	G112-54	07:52:02	-01:16:54		4 MIN (7.4)
		14			↑	90 <sup>s</sup>	
		15			↓	90 <sup>s</sup>	
		16	G52-19	08:31:57	09:32:48		3 MIN (8.9)
		17			↑	90 <sup>s</sup>	MOSTLY CLDY - HOLDING
		18			↓	90 <sup>s</sup>	
		19	SKY			7 MIN	MOSTLY CLEAR
		20			↑	90 <sup>s</sup>	
		21	INCANDS			120 MIN	
		22	INCANDS			120 MIN	
		23	INCANDS			120 MIN	
		24	INCAND			48 MIN	
DEC 4-5		25			↓	90 <sup>s</sup>	5187A 80μ SLIT
		26	SKY-EVE			5 MIN	MOSTLY CLDY
		27			↑	90 <sup>s</sup>	
5007		28	HAL6300	0 <sup>h</sup> 26:18	10:22:45		14 <sup>m</sup> 26 <sup>s</sup> 6300A 80μ SLIT (MOSTLY CLDY)
8		29	HAL6300			6 MIN	12 <sup>ARC</sup> EAST OF HALLEY
9		30	HAL6300			5 MIN	6 ARC 5 <sup>c</sup> EAST OF HALLEY NUCLEUS
5010		31	HAL6300			5 MIN	12 ARC SEC WEST OF HALLEY "
11		32	HAL6300			5 MIN	6 ARC SEC WEST OF HALLEY "

Spectrograph ECHELLE

Intensified Reticon

TO CAM 12/6

Grating \_\_\_\_\_

Log Sheet

RAW/RET 9

Telescope 61" WYETHDate DEC 4-5Observer GS. NUNDisk ORD 796

Change....	File	ID	RA	Dec	1950.0	L/R	↑/↓	Exposure	Comments
5012	1	HAL 6300	0°26:18	10:27:45				5 MIN	SLIT 12 ARC SEC SOUTH OF HALLEY NUCLEUS
13	2	HAL 6300						5 MIN	6 ARC SEC SOUTH OF " "
14	3	HAL 6300						6 MIN	12 ARC SEC NORTH OF " "
15	4	HAL 6300						5 MIN	6 ARC SEC NORTH OF " "
5016	5	HAL 6300						8 MIN	24 ARC SEC EAST OF " "
	6	TH-AR					↑	90°	
	7	TH-AR					↓	90°	6198 A 120 μ SLIT
	8	HAL 6198A						30 MIN	ON NUCLEUS
	9	HAL 6198						30 MIN	" "
	10	TH-AR					↑	90°	
	11	TH-AR					↓	90°	5890A 120 SLIT
	12	HAL 5890						20 MIN	58 ON NUCLEUS
	13	TH-AR					↑	90°	
	14	TH-AR					↓	90°	80 μ 5187A " HALOS "
	15	G 88-10	7 07 21	+24 25 42				20 MIN	(10.2) NO FINDER CHART
	16	TH-AR					↓	90°	USED NW STAR
	17	G 88-10	"	"				25 MIN	
	18	TH-AR					↑	90°	
	19	TH-AR					↓	90°	
	20	G 87-47	7:32:15	36:03:54				8 MIN	(10.2)
	21	TH-AR					↑	90°	
	22	TH-AR					↓	90°	
	23	G 88-5	7:03:12	18:42:54				13 MIN	(10.2) (CLDS)
	24	TH-AR					↑	90°	
	25	TH-AR					↓	90°	
	26	G 41-41	9:26:35	08:51:24				25 MIN	(11.1)
	27	TH-AR					↓	90°	
	28	G 41-41	"	"				25 MIN	
	29	TH-AR					↑	90°	
	30	TH-AR					↓	90°	
	31	H 66141	7:59:39	2:28:23				2 MIN	(11.4) IAU STANDARD
	32	TH-AR					↑	90°	

6300A 80 μ SLIT

TO CAM 12/6

RAW/RET 9

Spectrograph ECHELLE Intensified Reticon

Grating \_\_\_\_\_ Log Sheet

Telescope 6" WYETH Date DEC 4-5 1985 Disk ORD 797 Observer GS

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90 <sup>s</sup>	5187A. 80μ SLIT HACOS
		2	-122669	8:44:24	-13:11:00	20 <sup>MIN</sup>	(10.2) NO FINDER CHART (P 301)
		3			↓	90 <sup>s</sup>	
		4	-122669	"	"	15 <sup>MIN</sup>	
		5			↑	90 <sup>s</sup>	
		6			↓	90 <sup>s</sup>	
		7	H74000	8:38:31	-16:09:30	12 <sup>MIN</sup>	(9.6)
		8			↑	90 <sup>s</sup>	
		9			↓	90 <sup>s</sup>	
		10	G41-5	8:50:33	09:36:48	9 <sup>MIN</sup>	(11.2)
		11			↑	90 <sup>s</sup>	
		12			↓	90 <sup>s</sup>	
		13	G53-30	10:09:56	-00:23:12	5 <sup>MIN</sup>	(10.2)
		14			↑	90 <sup>s</sup>	
		15			↓	90 <sup>s</sup>	
		16	H97916	11:13:19	02:21:36	11 <sup>MIN</sup>	(9.3)
		17			↑	90 <sup>s</sup>	
		18			↓	90 <sup>s</sup>	
		19	+222411	11:48:59	22:23:36	10 <sup>MIN</sup>	(9.3)
		20			↑	90 <sup>s</sup>	
		21			↓	90 <sup>s</sup>	
		22	G59-5	12:10:56	23:32:36	3 <sup>MIN</sup>	(9.4)
		23			↑	90 <sup>s</sup>	
		24			↓	90 <sup>s</sup>	
		25	G60-47	12:52:44	08:06:12	7 <sup>MIN</sup>	(9.9)
		26			↑	90 <sup>s</sup>	
		27			↓	90 <sup>s</sup>	
		28	G61-24	12:55:04	18:57:48	5 <sup>MIN</sup>	(8.9) (TRY CLOUD)
		29			↑	90 <sup>s</sup>	
		30			↓	90 <sup>s</sup>	
		31	H114762	13:09:54	17:46:55	4 <sup>MIN</sup>	7.3 IAU STANDARD
		32			↑	90 <sup>s</sup>	

ORO-NOV 12/7 RDS

Spectrograph ECHELLE Intensified Reticon TO CAM1  
 Log Sheet RAWRET 9  
 Grating \_\_\_\_\_ Observer GS  
 Telescope 61" WYETH Date DEC 4-5 1985 Disk ORO 798

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90 <sup>s</sup>	5187A 80μ SLIT
	H107752	2	12:20:21	11:52:54		6 min	(10.0)
		3			↑	90 <sup>s</sup>	
		4			↓	90 <sup>s</sup>	
	+182757	5	13:34:07	18:24:24		4 min	(9.8)
		6			↑	90 <sup>s</sup>	
		7			↓	90 <sup>s</sup>	
		8				7 min	
		9			↑	90 <sup>s</sup>	MICROMETER/SLIT
		10				120 min	ASSEMBLY PINNED
		11				120 m	IN PLACE
		12				120 m	↓
7 DEC 85		13			↓	90s	5187A 80μ
	H66141	14	07:59:40	02:28:24		3 min	IAU standard
		15			↑	90s	
		16			↓	90s	
	G87-47	17	07:32:15	36:03:54		10 m	10.3 Halo Binaries
		18			↑	90s	
		19			↓	90s	
	G89-14	20	07:49:48	08:55:12		15 m	10.4/40
		21			↑	90s	
		22			↓	90s	
	G48-29	23	09:38:08	01:14:30		20 m	10.5/100
		24			↕	90s	
		25				20 m	
		26			↑	90s	
		27			↓	90s	
	G146-71	28	10:51:15	39:47:06		8 m	10.3/30
		29			↑	90s	
		30			↓	90s	
	H89449	31	10:17:01	19:43:31		2 m	IAU standard
		32			↑	90s	

Spectrograph ECHELLE

Intensified Reticon

TO CAM 12/8

Grating 300L

Log Sheet

RAW/RET 9

Telescope 61" Wyeth

Date 7 DEC 1985

Observer RPS

Disk 799

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	
	S179228		10:45:05	-25:10:24		8m	9.3/30
		3			↑	90s	
		4			↓	90s	
	H92588		10:38:52	-01:28:41		2m	IAU standard
		6			↑	90s	
		7			↓	90s	
	G61-24		12:55:44	18:57:48		6m	8.7/50
		9			↑	90s	
		10			↓	90s	
	S63020		12:26:38	31:40:00		2m	7.9/20
		12			↑	90s	
		13			↓	90s	
	H106516		12:12:36	-10:01:14		2m	6.1/20
		15			↑	90s	
		16			↓	90s	
	G14-54		13:25:44	-00:34:30		2 1/2 m	7.4/20
		18			↑	90s	
		19			↓	90s	
	G44-6		10:11:32	03:24:18		2m	7.7/15 Watch for sky contamination
		21			↑	90s	
		22			↓	90s	
	SKY-DWN		slow			5m	
		24			↑	90s	
	INCANDS					120m	
	INCANDS					120 MIN	
	INCANDS					23 MIN	
	TH-AR				↓	90s	
	SKY-EVE					5m	
	TH-AR				↑	90s	
		31					
		32					

12/17/81

Intensified Reticon TO CAM 12/8

Spectrograph ECHELLE Log Sheet RAWRET 9

Grating 300L Observer rum/CS

Telescope 61" WYETH Date DEC 7-8 1985 Disk ORO ~~787~~ 800

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	60 <sup>s</sup>	6300 A 120 μ SLIT
5017		2	HAL6300	0003:00	08:16:00	10 <sup>min</sup>	SLIT ON NUCLEUS <sup>HOLD</sup> OVERCAST
DEC 8-9		3	TH-AR		↓	90 <sup>s</sup>	5187A 80 μ SLIT
		4	SKY			5 <sup>min</sup>	OVERCAST
		5	TH-AR		↑	90 <sup>s</sup>	
		6	TH-AR		↓	60 <sup>s</sup>	6300A 120 μ
WRONG DATE/TIME	18	7	HAL6300	23:58.5	07:20	5 <sup>min</sup>	ON NUCLEUS
	19	8	TH-AR		↓	60 <sup>s</sup>	
		9	HAL6300			10 <sup>min</sup>	40" EAST OF NUCLEUS
		10	TH-AR		↓	60 <sup>s</sup>	
20		11	HAL6300			10 <sup>min</sup>	40" WEST OF NUCL.
		12	TH-AR		↓	60 <sup>s</sup>	
21		13	HAL6300			10 <sup>min</sup>	20" EAST "
		14	TH-AR		↓	60 <sup>s</sup>	
22		15	HAL6300			10 <sup>min</sup>	40" EAST, 20" SOUTH
		16	TH-AR		↓	60 <sup>s</sup>	1
23		17	HAL6300			10 <sup>min</sup>	40" EAST 10" SOUTH
		18	TH-AR		↓	60 <sup>s</sup>	
24		19	HAL6300			10 <sup>min</sup>	40" EAST 10" <del>WEST</del> NORTH
		20	TH-AR		↓	60 <sup>s</sup>	
25		21	HAL6300			10 <sup>min</sup>	40" EAST 20" NORTH
		22	TH-AR		↓	60 <sup>s</sup>	
26		23	HAL6300			10 <sup>min</sup>	20" WEST OF NUCLEUS
		24	TH-AR		↓	60 <sup>s</sup>	
27		25	HAL6300			10 <sup>min</sup>	20" SOUTH OF NUCLEUS
		26	TH-AR		↓	60 <sup>s</sup>	
28		27	HAL6300			4 <sup>h</sup> 50 <sup>s</sup>	20" NORTH OF NUCLEUS (LOTS OF CLOUDS)
		28	TH-AR		↑	60 <sup>s</sup>	
		29	TH-AR		↓	60 <sup>s</sup>	6250A - 120 μ SLIT
5029		30	HAL6250			15 <sup>min</sup>	ON NUCLEUS
		31	TH-AR		↑	60 <sup>s</sup>	
		32					



12/9 PPS

Spectrograph ECHELLE Intensified Reticon TO CAM  
 Log Sheet RAW/RET 9  
 Grating 300L Observer mm/cs  
 Telescope 61" WYKTH Date DEC 9 1985 Disk ORO 801

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 <sup>s</sup>	6200 A 180 μ SLIT
5030		2	HAL 6200 23:58.5	07° 20		19 MIN	ON NUCIUS (PTLY CLDY)
		3			↑	60 <sup>s</sup>	
		4			↓	90 <sup>s</sup>	<del>5187A</del> 5187A 80 μ SLIT
		5	HZL 162 04:06:14	19:28.45		2 MIN	(55) 1AU STANDARD
		6			↑	90 <sup>s</sup>	
		7			↓	90 <sup>s</sup>	
		8	G37-2L 03:05:28	26:09:06		2 MIN	(8.0) HALO BINARIES
		9			↑	90 <sup>s</sup>	
		10			↓	90 <sup>s</sup>	
		11	S133165 06:19:35	-05:25:48		4 MIN	(8.0)
		12			↑	90 <sup>s</sup>	
		13			↓	90 <sup>s</sup>	
		14	G88-10 07:07:21	24:25:42		20 MIN	(11.8) NO FIND CHART
		15			↓	90 <sup>s</sup>	
		16	G88-10	"	"	20 MIN	"
		17			↑	90 <sup>s</sup>	
		18			↓	90 <sup>s</sup>	
		19	G87-47 07:32:15	56:03:54		9m	10.3/30 Broken clouds
		20			↑	90s	
		21			↓	90s	
		22	G195-34 09:34:54	58:08:54		15m	11.8/20
		23			↑	90s	
		24			↓	90s	
		25	G112-43 07:41:11	07:03:18		8m	10.2/30 South component
		26			↓	90s	
		27	G112-44 07:41:12	07:03:18		19m	11.3/30 north component
		28			↑	90s	
		29			↓	90s	
		30	G9-14 08:37:49	13:44:06		10m	10.2/15
		31			↑	90s	
		32	/				

1219 RPS

Spectrograph ECHELLE

Intensified Reticon

TO CAM

Grating 300 R

Log Sheet

RAW RET 9

Telescope 61" Wyeth

Date Dec 8-9, 1985

Observer RPS

Disk ORO 802

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	
	G114-48	φ9:11:12	-φ3:41:18			10m	10.7/15 cloudy
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	G116-26	φ9:24:43	4φ:22:18			4m	10.2/15
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	G176-27	11:19:φ4	5φ:54:φ6			23m	11.3/30 clouds
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	H92588	1φ:38:52	-φ1:28:41			2m	IAU standard
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	G162-51	1φ:22:φ5	-φ5:15:54			3 1/2 m	9.8/20
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	G162-53	1φ:22:5φ	-φ2:2φ:48			13m	11.7/15
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	G162-21	1φ:φ5:φ5	-φ6:11:42			2m	7.7/15
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	G162-16	1φ:41:29	φφ:5φ:φφ			3 1/2 m	9.9/15
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	G162-68	1φ:32:14	-φ9:51:φ6			7m	10.5/15
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	+292φ55	1φ:26:43	+29:φφ:φφ			5m	10.8/20
	Th-Ar				↑	90s	
	/						
	/						

Spectrograph ECHELLE

Intensified Reticon

TO CAM 12/10  
9

Grating 300 L

Log Sheet

RAW/RET

Telescope 61" Wyeth

Date Dec 8-9, 1985

Observer RPS

Disk ORO 803

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	
	G 61-24		12:55:04	18:57:48		4m	8.9/50
		3			↓	90s	
	G 61-23		12:55:03	18:57:48		3 1/2	9.8/15 Sky coming up fast
		5			↑	90s	
		6			↓	90s	
	H 89449		10:17:01	19:43:31		2m	1AU standard
		8			↑	90s	
		9			↓	90s	
	SKY-DWN		stow			5m	
		11			↑	90s	
	INCANDS					120 MIN	
	INCANDS					90 MIN	
DEC 9-10		14			↓	90s	5187A 80 μ SLIT
	SKY-CUL					5 MIN	OVERCAST
		16			↑	90s	
		17			↓	60s	6350 A 120 μ SLIT
5031	HAL 6350		23:41	6:40		10 MIN	ON NUCLEUS
		19			↑	60s	
	<del>TH-AR</del>				↓	60s	6400 A 120 μ SLIT
32	HAL 6400		"	"		10 MIN	ON NUCLEUS
		22			↑	60s	
		23			↓	60s	6450 A 120 μ SLIT
33	HAL 6450		"	"		10 MIN	ON NUCLEUS
		25			↑	60s	
	<del>TH-AR</del>				↓	60s	6500 A 120 μ SLIT
34	HAL 6500		"	"		10 MIN	ON NUCLEUS
		28			↑	60s	
		29			↓	60s	6550 A 120 μ SLIT
5035	HAL 6550		"	"		10 MIN	ON NUCLEUS
		31			↑	60s	
		32					

12/10 RPS

Spectrograph ECHELLE Intensified Reticon TO CAM1  
 Grating 3000 Log Sheet RAW/RET 9  
 Telescope 61" WYETH Date DEC 9-10 1985 Observer nm/GS  
 Disk ORO 804

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
5036	1	TH-AR			↓	60 <sup>s</sup>	6600A 120μ SLIT
	2	HAL6600	23 <sup>h</sup> 41	60 <sup>o</sup> 40		12 <sup>MIN</sup>	ON NUCLEUS
	3	TH-AR			↑	60 <sup>s</sup>	
37	4	TH-AR			↓	60 <sup>s</sup>	6650A 1
	5	HAL6650	"	"		12 <sup>MIN</sup>	ON NUCLEUS (NEAR HORIZON)
	6	TH-AR			↑	60 <sup>s</sup>	
5038	7	TH-AR			↓	60 <sup>s</sup>	
	8	HAL6700	"	"		11 <sup>MIN</sup>	6700A ON NUCLEUS (NEAR HORIZON)
	9	TH-AR			↑	60 <sup>s</sup>	
	10	TH-AR			↓	90 <sup>s</sup>	5187A 80μ SLIT
	11	H26162	04:06:14	+19:28:43		3 <sup>MIN</sup>	(5.5) IAU STANDARD
	12	TH-AR			↑	90 <sup>s</sup>	
	13	TH-AR			↓	90 <sup>s</sup>	
	14	G87-45	07:29:47	31:13:36		23m	(11.4)/50
	15	TH-AR			↑	90s	
	16	TH-AR			↓	90s	
	17	L81	04:38:41	13:07:34		20m	(11.2) Hyades Binary
	18	TH-AR			↑	90s	
	19	TH-AR			↓	90s	
	20	LP416	04:48:48	17:12:00		7m	11.0 "
	21	TH-AR			↑	90s	
	22	TH-AR			↓	90s	
	23	J357	05:13:12	19:07:42		9m	11.0 "
	24	TH-AR			↑	90s	
	25	TH-AR			↓	90s	
	26	H388	04:23:48	16:38:08		2m	"
	27	TH-AR			↑	90s	
	28	TH-AR			↓	90s	
	29	G87-47	07:32:15	36:03:54		8m	10.3/30 Halo
	30	TH-AR			↑	90s	
	31						
	32						

12/10 PDS

Spectrograph ECHELLE Intensified Reticon TO CAM  
 Grating 3002 Log Sheet RAW RET 9  
 Telescope 61" Wyeth Date 9-10 Dec. 1985 Observer RPS  
 Disk ORO 805

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	Th-Ar		↓	90s	<del>#</del>
	G 99-31W	2	05:42:11	09:13:42		13m	11.8/15
		3	Th-Ar		↑	90s	
		4	Th-Ar		↓	90s	
	+ 251981	5	08:41:28	24:59:44		9m	9.3/100
		6	Ta-Ar		↑	90s	
		7	Th-Ar		↓	90s	
	-122669	8	08:44:24	-13:11:04		20 1/2 m	{ No star came up on offset; field does not look like chart This seems to be the only likely candidate!
		9	Th-Ar		↑	90s	
	-122669	10	"	"		15m	
		11	Th-Ar		↑	90s	
		12	Th-Ar		↓	90s	
	G114-26	13	09:56:39	-03:49:36		7m	9.7/30
		14	Th-Ar		↑	90s	
		15	Th-Ar		↓	90s	
	G41-41	16	09:26:35	09:51:24		22m	11.2/100
		17	Th-Ar		↑	90s	
	G41-41	18	"	"		20m	
		19	Ta-Ar		↑	90s	
		20	Th-Ar		↓	90s	
	G41-43	21	09:24:46	11:29:06		3m	9.7/15
		22	Th-Ar		↑	90s	
		23	Ta-Ar		↓	90s	
	G147-58	24	11:27:43	36:07:04		3m	9.9/20
		25	Ta-Ar		↑	90s	
		26	Ta-Ar		↓	90s	
	G147-36	27	11:14:34	29:50:36		2m	9.3/15 No chart
		28	Th-Ar		↑	90s	
		29	Th-Ar		↓	90s	
	H92588	30	10:38:52	-01:26:41		2m	IAU Standard
		31	Th-Ar		↑	90s	
		32	/				

Spectrograph ECHELLE Intensified Reticon TO CAM 12/10  
 Grating 300L Log Sheet RAW RET 9  
 Telescope 61" Wyeth Date 9-10 DEC 1985 Observer RPS  
 Disk ORO 806

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	
		2	G61-24	12:55:04	18:57:48	↓	4m 8.9/50
		3			↑	90s	
		4			↓	90s	
		5	G10-26	11:26:25	101:22:12	↓	3m 9.8/15
		6			↑	90s	
		7			↓	90s	
		8	G163-54	11:07:06	12:43:36	↓	2m 7.7/15 stay coming up
		9			↑	90s	
		10			↓	90s	
		11	H8 9449	10:17:41	19:43:31	↓	2m IAU standard
		12			↑	90s	
		13			↓	90s	
		14	SKY-DWN	stow		5m	
		15			↑	90s	
		16	IN CAN			120m	
		17	IN CAN			90m	
		18					
		19					
		20					
		21					
		22					
		23					
		24					
		25					
		26					
		27					
		28					
		29					
		30					
		31					
		32					

Spectrograph ECHELLE

Intensified Reticon

TO CAM 12/14

Grating 300L

Log Sheet

RAW RET 9

Telescope 61" WYETHDate DEC 10-11 1985Observer GSDisk ORO 807

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90 <sup>s</sup>	5187A 80μ SLIT
		2				5 MIN	PTLY CLOUDY
		3			↑	90 <sup>s</sup>	
DEC 12-13		4			↓	60 <sup>s</sup>	6700A 120μ SLIT
5039		5	HAL 6700	23° 33.1	±5° 21	2 <sup>h</sup>	PTLY CLOUDY
		6			↑	60 <sup>s</sup>	
		7			↓	60 <sup>s</sup>	6705A
5040		8	HAL 6705	"	"	25 <sup>MIN</sup>	
		9			↑	60 <sup>s</sup>	
		10			↓	90 <sup>s</sup>	6750A
41		11	HAL 6750	67??	"	25 MIN	
		12			↑	60 <sup>s</sup>	
		<del>13</del>	<del>TH-AR</del>		<del>↓</del>	<del>60<sup>s</sup></del>	
DEC 14-15		1413	TH-AR		↓	60 <sup>s</sup>	6750A 120μ SLIT ON NUCLEUS
42		1514	HAL 6750	23° 15.8	3° 37.5	15 <sup>MIN</sup>	
		1615			↑	60 <sup>s</sup>	
		1716			↓	60 <sup>s</sup>	6800A
43		1817	HAL 6800	"	"	20 <sup>MIN</sup>	
		1918			↑	60 <sup>s</sup>	
		2019			↓	60 <sup>s</sup>	6850A
44		2120	HAL 6850	"	"	20 <sup>MIN</sup>	
		2221			↑	60 <sup>s</sup>	
		2322			↓	60 <sup>s</sup>	
45		2423	HAL 6870	"	"	20 <sup>h</sup>	
		2524			↑	60 <sup>s</sup>	
		2625			↓	60 <sup>s</sup>	
46		2726	HAL 6925	"	"	15 <sup>h</sup>	
		2827			↑	60 <sup>s</sup>	
		2928			↓	60 <sup>s</sup>	
47		3029	HAL 6990	"	"	15 <sup>h</sup>	
		3130			↑	60 <sup>s</sup>	
		32					

Intensified Reticon  
 Spectrograph ECHELLE  
 Log Sheet  
 Grating 300  
 Telescope 4" Date DEC 14-15

TO CAM 12/18  
 RAWRET 9  
 Observer RM/RMG  
 Disk ORO 808

Change.... File ID 1950.0 RA Dec L/R Exposure Comments

Change....	File	ID	1950.0 RA	Dec	L/R	Exposure	Comments
		1				60 <sup>s</sup>	
5048		2	23 15.8	3° 37.0	↓	15 <sup>m</sup>	
		3				60 <sup>s</sup>	
		4			↑	60 <sup>s</sup>	
49		5			↓	15	
		6				60 <sup>s</sup>	
		7			↑	60 <sup>s</sup>	
50		8			↓	30 <sup>m</sup>	
		9			↑	60 <sup>s</sup>	
		10			↓	60 <sup>s</sup>	
51		11				20 <sup>m</sup>	
		12			↑	60 <sup>s</sup>	
52		13				6 <sup>m</sup> 15	
		14			↑	60 <sup>s</sup>	
12/15-16/85		15				90 <sup>m</sup>	
		16				"	
		17				45 <sup>m</sup>	
12 16/17/85		18			↓	60 <sup>s</sup>	6180 A 120 μ SLIT
53		19	23 15.5	+2° 36		30 <sup>m</sup>	ON NUCLEUS (MOD GRR)
		20			↑	60 <sup>s</sup>	
54		21				10 <sup>m</sup>	
		22			↓	60 <sup>s</sup>	
55		23				12 <sup>m</sup>	STOPPED IN CLDS
		24			↑	60 <sup>s</sup>	
5056		25				10min	
		26					
		27					
		28					
		29					
		30					
		31					
		32					



Intensified      Reticon

TO CAM 12/19

Spectrograph ECHELLE      Log      Sheet

Grating 300L      Observer REM

Telescope 61" WYETH      Date Dec 18-19 '85      Disk ORO-809

Change....	File	ID	RA	Dec	1950.0 L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	90 <sup>s</sup>	80N 5192A°
		2	Z-AND	23 31 15	48 32 32	15 <sup>m</sup>	
		3	TH-AR		↑	90 <sup>s</sup>	
		4	TH-AR		↓	90 <sup>s</sup>	
		5	EG AND	00 41 52	40 24	3 <sup>m</sup>	
		6	TH-AR		↑	90 <sup>s</sup>	
		7	TH-AR		↓	90 <sup>s</sup>	
		8	AX PER	01 33 06	54 00 19	20 <sup>m</sup>	
		9	TH-AR		↑	90 <sup>s</sup>	
		10	TH-AR		↓	90 <sup>s</sup>	
		11	UV AVR	05 18 33	32 27 48	15 <sup>MIN</sup>	
		12	TH-AR		↑	90 <sup>s</sup>	
		13	TH-AR		↓	90 <sup>s</sup>	
		14	TX CAM	12 42.3	37 02	20 <sup>MIN</sup>	
		15	TH-AR		↑	90 <sup>s</sup>	
		16	TH-AR		↓	90 <sup>s</sup>	6563 A 80μ SLIT
		17	OMEGA ORI	05 36 : 33	04 05 : 41	4 <sup>MIN</sup>	(4.5)
		18	TH-AR		↑	90 <sup>s</sup>	
		19	TH-AR		↓	90 <sup>s</sup>	5187A 80N
		20	(18) ASTEROID	07:05:20	07:50:37	12 <sup>MIN</sup>	ASTEROID (10 <sup>TH</sup> MAG) FOR ZERO
		21	TH-AR		↓	90 <sup>s</sup>	POINT
		22	(18)	"	"	4 <sup>MIN</sup>	
		23	TH-AR		↑	90 <sup>s</sup>	
		24	TH-AR		↓	90 <sup>s</sup>	
		25	H2616Z	04:06:14	19:28:43	3 <sup>MIN</sup>	(5.5) IAU STANDARD
		26	TH-AR		↑	90 <sup>s</sup>	
		27	TH-AR		↓	90 <sup>s</sup>	
		28	H66141	07:59:39	02:26:23	3 <sup>MIN</sup>	(4.4) IAU STANDARD
		29	TH-AR		↑	90 <sup>s</sup>	
		30	TH-AR		↓	90 <sup>s</sup>	
		31	(45)	08:12:53	14:05:45	20 <sup>MIN</sup>	(12.5) ASTEROID FOR ZERO POINT
		32	TH-AR		↑	90	

COUNT TOO HI

NOT A ASTEROID

Spectrograph ECHELLE

Intensified Reticon

TO CAM 12/19

Grating 300

Log Sheet

RAW/RET 9

Telescope 6" WYATI

Date DEC 18-19  
1985

Observer GS

Disk 000 810

Change.... File ID RA Dec 1950.0 L/R ↑/↓ Exposure Comments

→  
→  
→

Change....	File	ID	RA	Dec	1950.0	L/R	↑/↓	Exposure	Comments
		1					↓	90°	5187A. 80μSLIT
		2						6 MIN	(8.2) ASTEROID FOR ZERO POINT
		3					↕	90°	
		4						3 MIN	" " "
		5					↑	90°	
		6					↓	90°	
		7						2 MIN	(4.8) 1 AU STANDARD
		8					↑	90°	
		9					↓	90°	
		10						4 MIN	(6.3) 1 AU STANDARD
		11					↑	90°	
		12					↓	90°	
		13						4 MIN	(7.3) 1 AU STANDARD
		14					↑	90°	(TELESCOPE PROBLEMS)
		15					↓	90°	40°
		16						8 MIN	(9.9) HALOS
		17					↓	90°	
		18						16 MIN	(10.1)
		19					↑	90°	
		20					↓	90°	
		21						22 MIN	(9.3) LOUSY SEEING 10" AT TIMES
		22					↑	90°	
		23					↓	90°	
		24						8 MIN	SKY
		25					↑	90°	
		26						120 MIN	IN/ANDY
		27						120 MIN	IN/ANDY
		28						98 MIN	IN/ANDY
		29					↓	90°	5187A 80μSLIT
		30						5 MIN	SKY-LUX
		31					↑	90°	
		32							

FORGOT TH-AR →

DEC 19-20

TO CAM 1420

RAW RET 9

Intensified Reticon

Spectrograph ECHELLE Log Sheet

Grating 3000 Observer CS

Telescope 61 Date DEC 19-20 1985 Disk ARO 811

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
5057	1	TH-AR			↓	90 <sup>s</sup>	6100 A 120μ SLIT
	2	HAL 6100	22:42:50	01:15:15		15 <sup>min</sup>	SLIT ON NUCLEUS
	3	TH-AR			↑	90 <sup>s</sup>	
58	4	TH-AR			↓	90 <sup>s</sup>	6050 A
	5	HAL 6050	"	"		20 <sup>min</sup>	SLIT ON NUCLEUS
	6	TH-AR			↑	90 <sup>s</sup>	
59	7	TH-AR			↓	90 <sup>s</sup>	6000 A
	8	HAL 6000	"	"		15 <sup>min</sup>	" " "
	9	TH-AR			↑	90 <sup>s</sup>	
5060	10	TH-AR			↓	60 <sup>s</sup>	
	11	HAL 5950	"	"		15 <sup>min</sup>	
	12	TH-AR			↑	60 <sup>s</sup>	
61	13	TH-AR			↓	60 <sup>s</sup>	
	14	HAL 5900	"	"		15 <sup>min</sup>	
	15	TH-AR			↑	60 <sup>s</sup>	
62	16	TH-AR			↓	60 <sup>s</sup>	
	17	HAL 5850	"	"		20 <sup>min</sup>	
	18	TH-AR			↑	60 <sup>s</sup>	
63	19	TH-AR			↓	60 <sup>s</sup>	
	20	HAL 5800	"	"		20 <sup>min</sup>	
	21	TH-AR			↑	60 <sup>s</sup>	
64	22	TH-AR			↓	60 <sup>s</sup>	
	23	HAL 5750	"	"		15 <sup>min</sup>	BRIE SKY AT LOW ELATION
	24	TH-AR			↑	60 <sup>s</sup>	+ MOON
5065	25	SKY 3750				10 <sup>min</sup>	
	26	TH-AR			↓	90 <sup>s</sup>	6563A 120μ SLIT
	27	2 AGR	22 03.2	-00 34		7 <sup>min</sup>	ND=1 FILTER
	28	TH-AR			↑	90 <sup>s</sup>	
	29	TH-AR			↓	90 <sup>s</sup>	40μ SLIT
	30	2 AND	23 35.1	+46 11		16 <sup>min</sup>	ND=1 FILTER
	31	TH-AR			↑	90 <sup>s</sup>	
	32						

RUST NOVA MICROMETER SETTINGS

TO CAM 12/22

Intensified      Reticon

Spectrograph ECHELLE      Log      Sheet

Grating 300L      Observer Rem/CYS

Telescope 61" WYETH      Date DEC 19-20 1985      Disk ORO 812

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90 <sup>s</sup>	6563A 40N SLIT
		2	04 58 32	43 45		10MIN	ND=1 Filter
		3			↑	90 <sup>s</sup>	
		4			↓	90 <sup>s</sup>	
		5	05 13 00	45° 57		8MIN	ND=2 Filter
		6			↑	90 <sup>s</sup>	
		7			↓	90 <sup>s</sup>	
		8	05 52 28	7° 24		7MIN	ND=2 Filter
		9			↑	90 <sup>s</sup>	
		10			↓	90	6563A 80N SLIT
		11	05 36 33	4° 06		3 <sup>min</sup>	
		12			↑	90 <sup>s</sup>	
DEC 21/22		13			↓	90 <sup>s</sup>	5187A 80μ SLIT
		14				5 MIN	NOVA CRASHED
		15			↑	90 <sup>s</sup>	
		16			↓	60 <sup>s</sup>	5700 120μ SLIT
5066		17				10 <sup>min</sup>	SLIT ON NUCLEUS, CLDS
		18			↑	60 <sup>s</sup>	
		19			↓	60 <sup>s</sup>	
5067		20				14 <sup>min</sup>	← IMPROV CLDS
		21			↑	60 <sup>s</sup>	
		22			↓	90 <sup>s</sup>	5187A 80μ SLIT
		23	04:06:14	19:28:43		3MIN	(6.5) 1 AU STANDARD
		24			↑	90 <sup>s</sup>	
		25			↓	90 <sup>s</sup>	
		26	03:23:53	34:15:18		3MIN	(6.7) HY CLDS HALOS
		27			↑	90 <sup>s</sup>	
		28			↓	90 <sup>s</sup>	
		29	03:59:53	35:09:18		4MIN	(8.5) PLY CLDY
		30			↑	90 <sup>s</sup>	
		31					
		32					

TO CAM 12/22

Spectrograph ECHELLE Intensified Reticon  
 Log Sheet RAW/RET 9  
 Grating 3000 Observer GS / DWL/AM  
 Telescope 61" WYATH Date DEC 21.22 1985 Disk ORD 813

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	<del>#</del> 5187A 80μ SLIT
	G37-26		03:05:28	26:09:06		4 min	(8.1) PTV CLOY HALOS
		3			↑	90s	↑
		4			↓	90s	ECH = .583 GRA = 1.1695
	G37-26		03:05:28	26:09:06		3m	CHANGED → SETTING
		6			↑	90s	
		7			↓	90s	clouds passing through
	G7-20		04:02:47	10:54:54		15m	11.6 / 15 ctr
		9			↑	90s	
		10			↓	90s	
	G82-5		04:12:29	-05:45:24		7m	10.7 / 15
		12			↑	90s	
		13			↓	90s	
	G84-9		04:42:43	03:52:54		20m	11.5 / 30 SE brighter of 20" pair
		15			↑	90s	
		16			↓	90s	
	G99-31W		05:42:11	09:13:42		20m	11.8 / 15 W of 6" pair
		18			↑	90s	
		19			↓	90s	
	S133165		06:19:35	-05:25:48		6m	8.0 / 100
		21			↑	90s	
		22			↓	90s	
	G88-5		07:03:12	18:42:54		6m	10.2 / 20
		24			↑	90s	
		25			↓	90s	
	G88-10		07:07:21	24:25:42		21m	11.9 / 60 NW
		27			↓	90s	
	G88-10					21m	
		29			↑	90s	
		30			↓	90s	
	S58912		06:12:35.8	37 44:38		3m	8.9 / 15
		32			↑	90s	



TO CAM 12-22

Spectrograph ECHELLE      Intensified      Reticon      Log      Sheet      RAW RET 9

Grating 300      Observer D. Latham

Telescope WYETH      Date 12/21-22/85      Disk 815

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	
		2	G10-26	11:26:25	01:22:12	3m	9.8/15      23
		3	Th-Av		↑	90s	
		4	Th-Av		↓	90s	
		5	H106516	12:12:36	-10:01:14	2m	6.1/20
		6	Th-Av		↑	90s	
		7	Th-Av		↓	90s	
		8	G202-65	16:34:30	+45:57:54	15m	11.2/60
		9	Th-Av		↑	90s	
		10	G202-65			15m	
		11	Th-Av		↑	90s	
		12	Th-Av		↓	90s	
		13	G147-58	11:27:43	36:07:00	3m	9.9/20
		14	Th-Av		↑	90s	
		15	Th-Av		↓	90s	
		16	H114762	13:09:57	17:46:55	2m	7.3      IAU STD
		17	Th-Av		↑	90s	
		18	Th-Av		↓	90s	
		19	H92588	10:38:51	-01:28:41	2m	6.3      IAU STD
		20	Th-Av		↑	90s	
		21	Th-Av		↓	90s	
		22	H89449	10:17:01	19:43:31	2m	4.8      IAU STD
		23	Th-Av		↑↓	90s	
		24	SKY	"	"	5m	
		25	Th-Av		↑	90s	
		26	INCAND			120 <sup>MIN</sup>	
		27	INCAND			100 <sup>MIN</sup>	
DEC 23		28	Th-AR		↓	90 <sup>s</sup>	5187 A 80% SWT
		29	SKY - CIV			5 <sup>MIN</sup>	ONLY CIV
		30	Th-AR		↑	90 <sup>s</sup>	
		31					
		32					

TO CAM 12/25

Intensified Reticon

Spectrograph ECHELLE Log Sheet RAW/RET 9

Grating 300 L Observer GS

Telescope 61" WY671 Date DEC 23-24 1985 Disk 0A0 916

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
	1	TH-AR			↓	90°	5187A 80μ SLIT <small>ECHELLE .582 GRAT. 1.1695</small>
	2	SKY-EVE				5 MIN	MOD CIRRUS
	3	TH-AR			↑	90°	
	4	TH-AR			↓	90°	
	5	H213014	22:29:45	17:00:28		5 MIN	(MOON 20%) IAU STANDARD
	6	TH-AR			↑	90°	
	7	TH-AR			↓	90°	
	8	G208-29	19:30:32	48:28:54		15 MIN	(8.5) <del>IS</del> CLOS AT END
	9	TH-AR			↑	90°	
	10	TH-AR			↓	60°	5140A 120μ SLIT
5068	11	HAL 5140	22:37	-0° 15'		2 MIN 13 SEC	END BY OVERCAST
	12	TH-AR			↑	60°	
	13	<del>TH-AR</del> H26162	04:06:14	19:28:43	↓	90°	(5.5) 5187A 80μ SLIT
	14	H26162	04:06:14	19:28:43		5 MIN	5.5 (MIRRORED) IAU STANDARD
	15	TH-AR			↑	90°	
	16	TH-AR			↓	90°	
	17	G73-57	02:23:23	05:33:12		3 MIN	(7.9) HAIDS
	18	TH-AR			↑	90°	
	19	TH-AR			↓	90°	
	20	<del>G73-57</del> G73-57	02:28:19	45:39:12		4 MIN	(11.2) END IN OVERCAST
	21	TH-AR			↑	90°	
	22	INCANDS				90 MIN	
DEC 24-25	23	TH-AR			↓	90°	5187A 80μ SLIT
	24	SKY-EVE				5 MIN	(MIRRORED WET) <small>ECHELLE .582 GRATING 1.1695</small>
	25	TH-AR			↑	90°	
DEC 25-26	26	TH-AR			↓	90°	5187A 80μ SLIT
	27	SKY-EVE				5 MIN	OVERCAST <small>ECHELLE .582 GRAT 1.1695</small>
	28	TH-AR			↑	90°	
	29	TH-AR			↓	90°	
	30	G210-46	20:58:01	40:03:42		10 MIN	(6.5)
	31	TH-AR			↑	90°	
	32						



1425

Spectrograph ECHELLE Intensified Reticon TO CAM  
 Grating 3002 Log Sheet RAW RET 9  
 Telescope 61" WYETH Date DEC 25-26 1985 Observer mm / RPS  
 Disk 000 217

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90"	5187A 80μ SLIT
	G 95-57A		03:43:36	41:17:25		5m	(8.2) BAD SEEING
		3			↑	90s	
		4			↓	90s	
	H193904		030449	151842		6m	(9.7)
		6			↑	90s	
		7			↓	90s	
	G84-37		05 07 06	05 29 42		5m	(9.7)
		9			↑	90s	
		10			↓	90s	
	G 77-90		05 50 25	-03 30 00		4m	(9.2)
		12			↑	90s	
		13			↓	90s	
	G 96-35		05 19 01	47 52 06		3m	
		15			↑	90s	
		16			↓	90s	
	S76773		04:46:12	24:43:00		7m	9.6 HYADES Bad seeing
		18			↑	90s	
		19			↓	90s	
	G8-64		04:44:12	20:49:00		9m	9.9 "
		21			↑	90s	
		22			↓	90s	
	VB76		04:26:26	26:33:48		4m	9.2 "
		24			↑	90s	
		25			↓	90s	
	VB109		04:37:05	23:12:30		7m	9.4 "
		27			↑	90s	
		28			↓	90s	
	VB131		05:06:37	27:58:08		4m	6.0 Moon "
		30			↑	90s	
		31					
		32					

12/26

Spectrograph ECHELLE

Intensified Reticon

TO CAM1

Grating 300L

Log Sheet

RAW/RET 9

Telescope 61" Wyeth

Date 25-26 DEC 1985

Observer RPS

Disk ORO 818

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	
		2	H388	04:23:48	16:38:08		3m Hyades standard Not in focus
		3	Th-Ar			↕	90s
		4	H382	04:23:32	16:44:30		4m "
		5	Th-Ar			↕	90s
		6	H388	04:23:48	16:38:08		3m "
		7	Th-Ar			↑	90s
		8	Th-Ar			↓	90s
		9	H20162	04:06:15	19:28:43		2 1/2 m IAU standard
		10	Th-Ar			↑	90s
		11	Th-Ar			↓	90s Halo Binaries
		12	S133165	06:19:35	-05:25:48		7m 8.0/100
		13	Th-Ar			↑	90s
		14	Th-Ar			↓	90s
		15	G88-5	07:03:12	18:42:54		7m 10.2/20
		16	Th-Ar			↑	90s
		17	Th-Ar			↓	90s
		18	G89-14	07:19:48	08:55:12		19m 10.4/40
		19	Th-Ar			↑	90s
		20	Th-Ar			↓	90s
		21	G90-25	07:50:22	30:45:40		4m 8.3/50
		22	Th-Ar			↑	90s
		23	Th-Ar			↓	90s
		24	G112-54	07:52:02	-01:16:54		2 1/2 m 7.4/30
		25	Th-Ar			↑	90s
		26	Th-Ar			↓	90s
		27	-011792	07:37:17	-01:24:12		3m 9.2/15
		28	Th-Ar			↑	90s
		29	Th-Ar			↓	90s
		30	G113-24	08:15:04	03:49:42		2m 7.7/30
		31	Th-Ar			↑	90s
		32	/				

12/20

Intensified Reticon TO CAM

Spectrograph ECHELLE Log Sheet RAW/RET 9

Grating 3002 Observer RPS

Telescope 61" Wyeth Date 25-26 DEC 1985 Disk ORO 819

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	Th-Ar		↓	90s	
		2	G113-22	φ8:14:24	φφ:1φ:3φ	4m	9.7/15 Seeing still bad
		3	Th-Ar		↑	90s	
		4	Th-Ar		↓	90s	
		5	G114-19	φ8:47:53	-φ5:2φ:3φ	3m	9.2/15
		6	Th-Ar		↑	90s	
		7	Th-Ar		↓	90s	
		8	G114-26	φ8:56:39	-φ3:49:3φ	9m	9.7/30
		9	Th-Ar		↑	90s	
		10	Th-Ar		↓	90s	
		11	G114-18	φ8:46:45	φ3:52:12	2m	7.9/7
		12	Th-Ar		↑	90s	
		13	Th-Ar		↓	90s	
		14	G114-48	φ9:11:12	-φ3:41:18	12m	10.7/15
		15	Th-Ar		↑	90s	
		16	Th-Ar		↓	90s	
		17	G48-29	φ9:38:φ8	φ1:14:3φ	21m	10.5/100
		18	Th-Ar		↕	90s	
		19	G48-29			21m	
		20	Th-Ar		↑	90s	
		21	Th-Ar		↓	90s	
		22	G41-34	φ9:2φ:φ6	11:29:φ6	4m	9.7/15
		23	Th-Ar		↑	90s	
		24	Th-Ar		↓	90s	
		25	G43-3	φ9:46:12	13:59:18	4m	8.3/50
		26	Th-Ar		↑	90s	
		27	Th-Ar		↓	90s	
		28	H92588	1φ:38:52	-φ1:28:41	2m	IAU standard
		29	Th-Ar		↑	90s	
		30	Th-Ar		↓	90s	
		31	G147-36	11:14:54	29:5φ:3φ	3m	9.3/15
		32	Th-Ar		↑	90s	



Spectrograph ECHELLE

Intensified Reticon

TO CAM 12/27

Grating \_\_\_\_\_

Log Sheet

RAW/RET 9

Telescope 61"Date 12/26-7/85Observer GS/raDisk ORO 821

Change.... File ID 1950.0 RA Dec L/R Exposure Comments

Change....	File	ID	1950.0	RA	Dec	L/R	Exposure	Comments
		1	TH-AR			↓	90 <sup>s</sup>	6563A. 80MSUT
		2	W ORI	5 36.5	01 06		7 <sup>m</sup>	THIN CLOS
		3	TH-AR			↑	90 <sup>s</sup>	
		4	TH-AR			↓	90 <sup>s</sup>	40W
		5	Q ORI	5 52:28	07:23:58		4 <sup>m</sup> 05 <sup>sec</sup>	
		6	TH-AR			↑	90 <sup>s</sup>	
27-28 Dec 1985		7	Th-Av			↓	90s	late start after clouds
		8	G95-570	03:43:37	41:17:25		3m	8.8/30 & SNOW!
		9	Th-Av			↑	90s	MOON 7 <sup>h</sup> + 27
		10	Th-Av			↓	90s	! FULL!
		11	S38029	02:23:36	44:44:20		17m	9.4/300
		12	Th-Av			↑	90s	
		13	S38029	"	"		15m	
		14	Th-Av			↑	90s	
		15	Th-Av			↓	90s	
		16	G173-57	02:28:49	45:39:12		9m	11.3/15
		17	Th-Av			↑	90s	
		18	Th-Av			↓	90s	
		19	G220-13	02:31:47	59:34:30		3m	8.9/30
		20	Th-Av			↑	90s	
		21	Th-Av			↓	90s	
		22	G99-31W	05:42:11	09:13:42		15m	11.8/25
		23	Th-Av			↑	90s	
		24	Th-Av			↓	90s	
		25	G82-18	04:23:07	05:09:36		12m	11.7/15
		26	Th-Av			↑	90s	
		27	Th-Av			↓	90s	
		28	H26162	04:06:14	119:28:43		2m	5.5/1000 IAU STD
		29	Th-Av			↑	90s	
		30	Th-Av			↓	90s	
		31	L28	04:14:06	+22:33:00		6m	11.1/15
		32	Th-Av			↑	90s	

Spectrograph ECHELLE Intensified Reticon TO CAM 12/27  
 Grating 300 Log Sheet RAWRET 9  
 Telescope Wyeth Date 12/27-28/85 Observer D. Latham  
 Disk ORD 822

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		T.A.V.			↓	90s	
	S133165	06:19:35	-5:25:48			6m	8.0/100
		T.A.V.			↑	90s	
		T.A.V.			↓	90s	
	G106-53	06:28:52	-01:31:54			4m	10.1/15
		T.A.V.			↑	90s	
		T.A.V.			↓	90s	
	G88-5	07:03:12	18:42:54			5m	10.2/20
		T.A.V.			↑	90s	
		T.A.V.			↓	90s	
	H74000	08:38:31	-16:09:35			12m	9.6/60
		T.A.V.			↑	90s	
		T.A.V.			↓	90s	
	-12°2669	08:44:24	-13:11:00			20m	10.3/200
		T.A.V.			↓	90s	
	-12°2669	"	"			20m	
		T.A.V.			↑	90s	
		T.A.V.			↓	90s	
	G114-26	08:56:39	-03:49:36			5m	9.7/30
		T.A.V.			↑	90s	
		T.A.V.			↓	90s	
	H66141	07:59:39	+02:28:24			2m	44/1000 IAU STD
		T.A.V.			↑	90s	
		T.A.V.			↓	90s	
	+1251981	08:41:27.9	24:59:00			8m	9.3/100
		T.A.V.			↑	90s	
		T.A.V.			↓	90s	
	G41-5	08:50:33	9:36:48			7m	11.2/15
		T.A.V.			↑	90s	
		T.A.V.			↓	90s	
	G41-34	09:20:06	11:29:06			3m	9.7/15 Good ID
		T.A.V.			↑	90s	

Spectrograph ECHELLE Intensified Reticon TO CAM 12/28  
 Grating 300 Log Sheet RAW/RET 9  
 Telescope WYETH Date 12/27-28/85 Observer D. Latham  
 Disk ORD 823

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	
		2	G41-41	09:26:35	8:51:24		20m 11.5/100
		3	TH-AR			↑	90s
		4	G41-41	"	"		20m
		5	TH-AR			↑	90s
		6	G41-41	"	"		20m haze & clouds
		7	TH-AR			↑	90s
		8	TH-AR			↓	90s
		9	H92588	10:38:51	-01:28:41		4m IAU STD
		10	TH-AR			↑	90s 2-3 mag ext
		11	INCANDS				90 <del>00</del> m Ended by clouds
		12	TH-AR			↓	90s
		13	H0136202	15 16 45	015712		2m CLEAR AGAIN
		14	TH-AR			↑	90s
		15	TH-AR			↓	90s
		16	RAWLSKY				6m
		17	TH-AR			↑	90s
		18	INCAND				120
		19	INCAND				73
DEC 28/29		20	TH-AR			↓	90s 5187A 80μ SLIT
		21	SKY-EVE				5 MIN
		22	TH-AR			↑	90s
5069		23	TH-AR			↓	60s 5100A 120μ SLIT
		24	HAL 5100	22 <sup>h</sup> 22.6	-01:46.9		5 MIN
		25	TH-AR			↑	60s
5070		26	TH-AR			↓	60s 5140A
		27	HAL 5140	"	"		5 MIN
		28	TH-AR			↑	60s
		29	TH-AR			↓	60s 5180A
5071		30	HAL 5180	"	"		8" 16"
		31	TH-AR			↑	60s
		32					

Spectrograph ECHELLE Intensified Reticon  
 Grating 300R Log Sheet  
 Telescope 6" WYETH Date DEC 28-29 1985

TO CAM 12/29  
RAW/RET 9

Observer rum/CS  
 Disk ORD 824

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR			↓ 60 <sup>s</sup>	5220 A 120μ SLIT
5072		2	HAL 5220	22 <sup>h</sup> 22.6	-01 46	12 <sup>m</sup>	
		3	TH-AR			↑ 60 <sup>s</sup>	
		4	TH-AR			↓ 60 <sup>s</sup>	
73		5	HAL 5260	"	"	15	
		6	TH-AR			↑ 60 <sup>s</sup>	
		7	TH-AR			↓ 60 <sup>s</sup>	
74		8	HAL 5300	"	"	12 <sup>m</sup>	
		9	TH-AR			↑ ↓ 60 <sup>s</sup>	
75		10	HAL 5340	"	"	12 <sup>m</sup>	
		11	TH-AR			↓ 60 <sup>s</sup>	
76		12	HAL 5380	"	"	11 <sup>m</sup>	
		13	TH-AR			↓ 60 <sup>s</sup>	
77		14	HAL 5420	"	"	12 <sup>MIN</sup>	
		15	TH-AR			↓ 60 <sup>s</sup>	
5078		16	HAL 5460	"	"	10 <sup>MIN</sup>	CLDS LAST 4 <sup>MIN</sup>
		17	TH-AR			↓ 90 <sup>s</sup>	5187A 80μ SLIT
		18	H 8779	01:23:53	-0° 39:29	8 <sup>MIN</sup>	IAU STANDARD (HY CLDS)
		19	TH-AR			↑ 90 <sup>s</sup>	
		20	TH-AR			↓ 90 <sup>s</sup>	
		21	G 98-42	06:02:49	26:33:48	3 <sup>MIN</sup>	(9.4)
		22	TH-AR			↑ 90 <sup>s</sup>	
		23	TH-AR			↓ 90 <sup>s</sup>	
		24	G 99-31W	05:42:11	09:13:42	18 <sup>MIN</sup>	(11.8) 25 WEST STAR
		25	TH-AR			↑ 90 <sup>s</sup>	
		26	TH-AR			↓ 90 <sup>s</sup>	
		27	S 133165	06:19:35	-05:25:48	5 <sup>MIN</sup>	8.0/100
		28	TH-AR			↑ 90 <sup>s</sup>	
		29	TH-AR			↓ 90 <sup>s</sup>	
		30	G 88-5	07:03:12	19:42:54	4 <sup>MIN</sup>	10.2/20
		31	TH-AR			↑ 90 <sup>s</sup>	
		32					



Intensified      Reticon      TO CAM 12/29

Spectrograph ECHELLE      Log      Sheet      RAW/RET 9

Grating 3000      Observer CS

Telescope 61" WYV-T1      Date DEC 29 1985      Disk 000 825

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90 <sup>s</sup>	5187A 80 u slit
		2	G88-10	07:07:21	24:25:42	19 <sup>MIN</sup>	11.8/10 NW/OP PAIR
		3	TH-AR		↑	90 <sup>s</sup>	
		4	G88-10	"	"	18 <sup>MIN</sup>	" "
		5	TH-AR		↑	90 <sup>s</sup>	
		6	TH-AR		↓	90 <sup>s</sup>	
		7	G87-47	07:32:15	36:03:54	5 <sup>MIN</sup>	10.3/30
		8	TH-AR		↑	90 <sup>s</sup>	
		9	TH-AR		↓	90 <sup>s</sup>	
		10	G41-34	09:20:06	11:29:06	2 <sup>MIN</sup>	9.6/15
		11	TH-AR		↑	90 <sup>s</sup>	
		12	TH-AR		↓	90 <sup>s</sup>	IAU STANDARD
		13	H66141	07:59:39	02:28:23	2 <sup>MIN</sup>	IAU STANDARD
		14	TH-AR		↑	90 <sup>s</sup>	
		15	TH-AR		↓	90 <sup>s</sup>	
		16	G114-26	08:56:39	03:49:36	3 <sup>MIN</sup>	9.6/30
		17	TH-AR		↑	90 <sup>s</sup>	
		18	TH-AR	<del>-122669</del>		↓	90 <sup>s</sup>
		19	-122669	08:44:24	-13:11:00	22 <sup>MIN</sup>	10.2/200
		20	TH-AR		↑	90 <sup>s</sup>	
		21	-122669	"	"	20 <sup>s</sup>	
		22	TH-AR		↑	90 <sup>s</sup>	
		23	TH-AR		↑	90 <sup>s</sup>	
		24	G88-13	07 10 24	17 31 18	4 <sup>m</sup>	10.3/15
		25	TH-AR		↑	90 <sup>s</sup>	
		26	TH-AR		↓	90 <sup>s</sup>	
		27	G88-14	07 10 51	25 06 00	3 <sup>m</sup>	8.4/15
		28	TH-AR		↑	90 <sup>s</sup>	
		29	TH-AR		↑	90 <sup>s</sup>	
		30	G88-13	07 19 43	09 00 06	3 <sup>m</sup>	9.4/15
		31	TH-AR		↑	90 <sup>s</sup>	
		32					

Spectrograph ECHELLE Intensified Reticon TO CAM 12/29  
 Grating 300L Log Sheet RAW/RET 9  
 Telescope SH Date 12/28-29/85 Observer CS/A  
 Disk ORO 826

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	90°	5187 A 80 μ slit
	G176-078	2	08:30:00	-20°34:12		6 min	10.0 / 100
		3	TH-AR		↑	90°	
		4	TH-AR		↓	90°	
	G41-41	5	09:26:35	08:51:24		15 min	11.1 / 100
		6	TH-AR		↓	90°	
	G41-41	7	"	"		18 min	"
		8	TH-AR		↑	90°	
		9	TH-AR		↓	90°	
	G44-45	10	10:50:48	10:00:24		6 min	10.1 / 30
		11	TH-AR		↑	90°	
		12	TH-AR		↓	90°	
	G53-30	13	10:09:56	-0°29:12		3 min	10.2 / 15
		14	TH-AR		↑	90°	
	<del>G9-47</del>	15	09:03:52	20:42:36	↓	90°	<del>7.7 / 15</del>
	G9-47	16	09:03:52	20:42:36		2 min	7.7 / 15
		17	TH-AR		↑	90°	
		18	TH-AR		↓	90°	
	G114-25	19	08:56:35	-06:11:48		22 min	11.9 / 30
		20	TH-AR		↑	90°	
		21	TH-AR		↓	90°	
	G10-26	22	11:26:25	01:22:12		2 min	9.8 / 15
		23	TH-AR		↑	90°	
		24	TH-AR		↓	90°	
	H89449	25	10:17:01	19:43:31		4 min	1 AU STANDARD
		26	TH-AR		↑	90°	
		27	TH-AR		↓	90°	
	H92588	28	10:38:51	-01:28:41		3 min	1 AU STANDARD
		29	TH-AR		↑	90°	
		30	TH-AR		↓	90°	
	G146-71	31	10:51:15	39:47:06		6 min	10.3 / 30
		32	TH-AR		↑	90°	



Spectrograph ECHELLE

Intensified

Reticon

TO CAM 12/29

Grating 300

Log Sheet

RAW/RET 9

Telescope 6" WYETHDate DEC 29 30 1985Observer mm/65Disk 000 828

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	90°	5187 A. 80μ SLIT
		2	SKY EYE			5 MIN	
		3	TH-AR		↑	90°	
		4	TH-AR		↓	90°	6300A 120μ SLIT
5079		5	HALL300	22 20 15	-02 01 50	10 MIN	45 MIN BEFORE AST. TWILIGHT (ON NUCLEUS)
		6	TH-AR		↓	90°	
80		7	HALL300	"	"	10 MIN	SLIT 36 <sup>SEC</sup> W. OF NUCLEUS 50" BEYOND TWILIGHT
		8	TH-AR		↓	90°	
81		9	HALL300	"	"	10 MIN	SLIT 72 <sup>SEC</sup> W OF NUCLEUS 15" BEYOND TWILIGHT
		10	TH-AR		↑	90°	
		11	TH-AR		↓	90°	
82		12	HALL300	"	"	10 MIN	SLIT 36 <sup>SEC</sup> E OF NUCLEUS NO GUIDE
		13	TH-AR		↓	90°	
83		14	HALL300	"	"	10 MIN	SLIT 72 <sup>SEC</sup> E OF NUCLEUS NO GUIDE
		15	TH-AR		↑	90°	
		16	TH-AR		↓	90°	<del>SLIT</del>
84		17	HALL300	"	"	10 MIN	SLIT 72 <sup>SEC</sup> E + 36 <sup>SEC</sup> N of NUCLEUS NO GUIDE
		18	TH-AR		↑	90°	
		19	TH-AR		↓	60°	5500A 120μ SLIT
85		20	HALL5500	"	"	8 MIN	SLIT ON NUCLEUS
		21	TH-AR		↓	60°	5550A
86		22	HALL5550	"	"	7 MIN	SLIT ON NUCLEUS
		23	TH-AR		↓	60°	5600A
87		24	HALL5600	"	"	8 MIN	SLIT ON NUCLEUS
		25	TH-AR		↓	60°	5650A
88		26	HALL5650	"	"	10 MIN	SLIT ON NUCLEUS
		27	TH-AR		↓	60°	5700A
5089		28	HALL5700	"	"	12 MIN	SLIT ON NUCLEUS
		29	<del>TH-AR</del>		↓	<del>60°</del>	<del>6100A</del>
		30					
		31					
		32					

Spectrograph ECHELLE Intensified Reticon  
 Grating 300 Log Sheet  
 Telescope S14 Date DEC 29/50

TO CAM 12/30

Observer RAWRET 9  
 Disk ORD 829

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		Th Ar			↓	90°	5187A
	G 95-578		03:43:37	41:11:25		3 <sup>m</sup>	Halo Binaries
		Th Ar			↑	90°	after 1-hour wait for clouds
		Th Ar			↓	90°	
	S148474		02:31:46	-12:36:01		5	
		Th Ar			↑	90°	
		Th Ar			↓	90°	
	G 171-57		00:22:23	45:24:48		3 <sup>m</sup>	
		Th Ar			↓	90°	
	G 171-58		00:22:26	47:46:12		2 <sup>m</sup>	
		Th Ar			↑	90°	Clouds have Returned
		Th Ar			↓	90°	Clear again, after 35 <sup>m</sup>
	S 15179		02:07:29.5	29:34:29		2	
		Th Ar			↓	90°	
	G 72-60		02:05:38	31:09:24		3 <sup>m</sup> 15°	
		Th Ar			↑	90°	
		Th Ar			↓	90°	
	G 94-49		02:14:04	27:11:12		4 <sup>m</sup>	
		Th Ar			↑	90°	
		Th Ar			↓	90°	
	G 172-49		01:17:59	51:43:24		2 <sup>m</sup>	
		Th Ar			↓	90°	
	G 172-46		01:13:37	51:35:48		9 <sup>m</sup>	
		Th Ar			↑	90°	
		Th Ar			↓	90°	
	G 173-2		01:27:49	52:29:18		5 <sup>m</sup>	
		Th Ar			↑	90°	
		Th Ar			↓	90°	
	G 172-61		01:31:18	48:29:06		8 <sup>m</sup>	
		Th Ar			↑	10°	
		Th Ar			↓	90°	
	G 243-63		01:06:30	61:16:48		22 <sup>m</sup>	

Spectrograph ECHELLE Intensified Reticon TO CAM 12/30  
 Grating 300 Log Sheet RAWRET 9  
 Telescope 61" Wyeth Date 12/29-30/1985 Observer R.J. Davis  
 Disk ORO 830

Change.... File ID RA Dec L/R Exposure Comments Halo Binaries

Change....	File	ID	RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↑	90 <sup>s</sup>	
		2			↓	90 <sup>s</sup>	
		3	H66141	07:59:38.9	02:28:24		2 <sup>m</sup> JAU Std. *
		4			↑	90 <sup>s</sup>	
		5			↓	90 <sup>s</sup>	
		6	G105-38	06:26:09	17:46:54		2 <sup>m</sup>
		7			↑	90 <sup>s</sup>	
		8			↓	90 <sup>s</sup>	
		9	G103-58	06:43:09	35:55:48		2 <sup>1</sup> / <sub>2</sub> <sup>m</sup>
		10			↑	90 <sup>s</sup>	
		11			↓	90 <sup>s</sup>	
		12	G87-47	07:32:15	36:03:54		5 <sup>m</sup>
		13			↑	90 <sup>s</sup>	
		14			↓	90 <sup>s</sup>	
		15	H74000	08:38:31	-16:09:35		11 <sup>m</sup>
		16			↑	90 <sup>s</sup>	
		17			↓	90 <sup>s</sup>	
		18	G54-17	10:09:02	24:00:06		2 <sup>m</sup>
		19			↑	90 <sup>s</sup>	
		20			↓	90 <sup>s</sup>	
		21	G44-28	10:33:30	16:08:06		2 <sup>m</sup>
		22			↑	90 <sup>s</sup>	
		23			↓	90 <sup>s</sup>	
		24	G54-33	10:33:58	21:51:54		2 <sup>m</sup>
		25			↑	90 <sup>s</sup>	
		26			↓	90 <sup>s</sup>	
		27	G58-25	10:48:48	20:32:57		2 <sup>m</sup>
		28			↑	90 <sup>s</sup>	
		29			↓	90 <sup>s</sup>	
		30	G247-49	04:58:50	63:00:12		2 <sup>m</sup>
		31			↑	90 <sup>s</sup>	
		32					

Spectrograph ECHELLE Intensified Reticon

TO CAM 12/30

Grating 300

Log Sheet

RAW/RET 9

Telescope 61" Wyeth

Date 12/29-30/85

Observer R. J. Davis

Disk 010 831

Change.... File ID 1950.0 RA Dec L/R Exposure Comments Halo Binaries

Change....	File	ID	1950.0	RA	Dec	L/R	Exposure	Comments
		1				↓	90 <sup>s</sup>	
	G191-55		05:53:04	58:40:24			8 <sup>m</sup>	
		3				↑	90 <sup>s</sup>	
		4				↓	90 <sup>s</sup>	
	G101-14		05:57:30	46:27:06			7 <sup>m</sup>	
		6				↑	90 <sup>s</sup>	
		7				↓	90 <sup>s</sup>	
	G101-31		06:13:11	44:43:42			2 <sup>m</sup>	
		9				↑	90 <sup>s</sup>	
		10				↓	90 <sup>s</sup>	
	G107-59		07:12:14	45:07:54			2 <sup>m</sup>	
		12				↑	90 <sup>s</sup>	
		13				↓	90 <sup>s</sup>	
	S155275		09:30:09	-17:12:42			3 <sup>m</sup>	
		15				↑	90 <sup>s</sup>	
		16				↓	90 <sup>s</sup>	
	S177727		09:34:01	-20:39:46			2 <sup>m</sup>	
		18				↑	90 <sup>s</sup>	
		19				↓	90 <sup>s</sup>	
	G55-22		10:25:42	-6:20:36			2 <sup>m</sup>	
		21				↑	90 <sup>s</sup>	
		22				↓	90 <sup>s</sup>	
	G250-23		06:45:49	60:59:18			2 <sup>m</sup>	
		24				↑	90 <sup>s</sup>	
		25				↓	90 <sup>s</sup>	
	S179228		10:45:05	-25:10:24			7 <sup>m</sup>	
		27				↑	90 <sup>s</sup>	
		28				↓	90 <sup>s</sup>	
	G44-45		10:50:48	10:00:24			6 <sup>m</sup>	
		30				↑	90 <sup>s</sup>	
		31				↓	90 <sup>s</sup>	
	G10-26		11:26:25	01:22:12			3 <sup>m</sup>	

Spectrograph ECHELLE Intensified Reticon  
 Grating 300 Log Sheet  
 Telescope 61" Wyeth Date 12/29-30/85

TO CAM 12/30  
RAW RET 9  
 Observer R.J. Davis  
 Disk ORO 832

Change.... File ID RA Dec 1950.0 L/R Exposure Comments Halo Binaries

Change....	File	ID	RA	Dec	1950.0	L/R	Exposure	Comments
						↑	90 <sup>s</sup>	
						↓	90 <sup>s</sup>	
							2 <sup>m</sup>	JAU RV std
						↑	90 <sup>s</sup>	
						↓	90 <sup>s</sup>	
							3 <sup>m</sup>	
						↑	90 <sup>s</sup>	
						↓	90 <sup>s</sup>	
							3 <sup>m</sup>	
						↑	90 <sup>s</sup>	
						↓	90 <sup>s</sup>	
							5 <sup>m</sup>	
						↑	90 <sup>s</sup>	
						↓	90 <sup>s</sup>	
							12 <sup>m</sup>	
						↑↓	90 <sup>s</sup>	
							11 <sup>m</sup>	
						↑	90 <sup>s</sup>	
						↓	90 <sup>s</sup>	
							12½ <sup>m</sup>	
						↑↓	90 <sup>s</sup>	
							15 <sup>m</sup>	
						↑	90 <sup>s</sup>	
						↓	90 <sup>s</sup>	
							9 <sup>m</sup>	
						↑	90 <sup>s</sup>	
						↓	90 <sup>s</sup>	
							3 <sup>m</sup>	JAU RV STANDARD
						↑	90 <sup>s</sup>	
						↓	90 <sup>s</sup>	
							5 <sup>m</sup>	
						↑	90 <sup>s</sup>	

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TO CAM 12-30

Spectrograph ECHELLE Intensified Reticon  
 Log Sheet RAW/RET 9  
 Grating 300 Observer JA  
 Telescope SH Date 12/29-30/95 Disk ORO 833

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
	1	INCAND				123 <sup>m</sup>	
	2	INCAND				55 <sup>MIN</sup>	
12/30-31	3	TH-AR			↓	90 <sup>S</sup>	5187A 80 <sup>N</sup>
	4	16-0069	013609	420028		18 <sup>m</sup>	
	5	TH-AR			↑↓	90 <sup>S</sup>	
	6	16-0069	"	"		18 <sup>m</sup>	
	7	TH-AR			↑↓	90 <sup>S</sup>	
	8	16-0068	013608	420050		10 <sup>m</sup>	
	9	TH-AR			↑↓	90 <sup>S</sup>	
	10	16-0269	013257	423647		20 <sup>m</sup>	
	11	TH-AR			↑↓	90 <sup>S</sup>	
	12	16-0268	013858	423648		6 <sup>m</sup>	
	13	TH-AR			↑↓	90 <sup>S</sup>	
	14	16-0278	014009	422254		12 <sup>m</sup>	SMALL CRT, V POOR SEEING
	15	TH-AR			↑↓	90 <sup>S</sup>	
	16	16-0277	014008	422257		12 <sup>m</sup>	
	17	TH-AR			↑	90 <sup>S</sup>	
	18	TH-AR			↓	90 <sup>S</sup>	
	19	G87-45	072947	311336		20 <sup>m</sup>	
	20	TH-AR			↑↓	90 <sup>S</sup>	
	21	G87-45	"	"		20 <sup>MIN</sup>	CLDS COMING
	22	TH-AR			↑	90 <sup>S</sup>	
	23	TH-AR			↓	90 <sup>S</sup>	
	24	H66141	7 <sup>h</sup> 59:39	02:28:33		3 <sup>MIN</sup>	IAU STAND.
	25	TH-AR			↑	90 <sup>S</sup>	
	26	TH-AR			↓	90 <sup>S</sup>	
	27	G45-30	11:01:45	06:03:54		2 <sup>MIN</sup>	8.2/15
	28	TH-AR			↑	90 <sup>S</sup>	
	29	TH-AR			↓	90 <sup>S</sup>	
	30	G56-8	10:58:05	15:43:24		3 <sup>MIN</sup>	9.4/15 CLDS
	31	TH-AR			↑	90 <sup>S</sup>	
	32						

Spectrograph ECHELLE

Intensified Reticon

TO CAM 1/1

Grating 3000

Log Sheet

RAW/RET 9

Telescope 61" WYETZ

Date DEC 30-31 1985

Observer GS

Disk ORO 834

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90°	5187A 80μ SLIT
		2	G41-41	09:26:35	08:51:24	15 MIN	11.1/100 (END IN CLDS)
		3			↑	90°	
		4				120"	
		5				120"	
		6				120"	
		7				120"	
		8				65"	
DEC 31 - JAN 1		9			↓	90°	5187A 80μ SLIT
		10				5 MIN	OVERCAST
		11			↑	90°	
JAN 1-2 1986		12			↓	90°	5187A 80μ SLIT
		13				5 MIN	
		14			↑	90°	
		15			↓	60°	6100A 120μ SLIT
509U		16	HAL 6100	22°15.0	-20°33	10 MIN	SLIT ON NUCLEUS - 30" BEFORE ASTRO TWILITE
		17			↓	60°	
91		18	HAL 6150	"	"	15 MIN	SLIT ON NUCLEUS 20" BEFORE ASTRO TWILITE
		19			↓	60°	
92		20	HAL 6200	"	"	15 MIN	SLIT ON NUCLEUS
		21			↓	60°	
93		22	HAL 6250	"	"	15 MIN	SLIT ON NUCLEUS
		23			↑	60°	
		24			↓	60°	
94		25	HAL 6200	22°15.0	-20°33	10 MIN	39° EAST 6° NORTH OF NUCLEUS
		26			↓	60°	
95		27	HAL 6200	"	"	10 MIN	SLIT 78° EAST 12° NORTH OF NUCLEUS
		28			↓	60°	
5096		29	HAL 6200	"	"	10 MIN	SLIT 36° WEST 6° SOUTH OF NUCLEUS
		30			↑	60°	
		31					
		32					